

**Notice of Allowability**

Application No.

10/632,604

Examiner

Chuc D Tran

Applicant(s)

PROS ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included, herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.


1. ☒ This communication is responsive to 8/1/03.
2. ☒ The allowed claim(s) is/are 1-6.
3. ☒ The drawings filed on 01 August 2003 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- \* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 2/10/04, 4/16/04 3/1/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

  
Dong Wong  
Supervisory Patent Examiner  
Technology Center 2800

**DETAILED ACTION**

**EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. David M, Maiorana, Tel: (216) 586-3939 on 9/30/04.

The application has been amended as follows:

Claim 3, line 2, "wherein a dielectric, magnetic or magneto dielectric material is placed below" change to - - wherein said antenna further comprises a dielectric, magnetic or magneto dielectric material placed below - -;

Claim 4, line 2, delete "wherein the resonant frequencies" add - - wherein the first and second conducting surfaces each has a resonant frequency, and the resonant frequencies - -;

Claim 5, line 2, delete "wherein the center" add - - wherein the inner and outer perimeters each has a center, and the center - -.

***Allowable Subject Matter***

2. Claims 1-6 are allowed.
3. The following is an examiner's statement of reasons for allowance:

Regarding claim 1, the reference of the Prior Art of the record fails to teach or suggest the combination of the limitations as set forth in the claim: the shape of at least one of the inner and outer perimeters is a space filling curve, the space filling curve being composed by at least ten

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segments, wherein the segments connected with each adjacent segment and forming an angle with each adjacent segment, no pair of adjacent segments defining a larger straight segment, and specifically comprising the limitation of the space filling curve never intersects with itself at any point except the initial and final points, and wherein the segments must be shorter than a tenth of the free space operating wavelength.

Regarding claims 2-6 are allowable for the reason given in the claim because of their dependency status from the independent claim 1.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Citation of relevant prior art***

Prior art Pett et al (USP. 5,210,542) disclose microstrip patch antenna structure.

Prior art Varadan et al (USP. 6,525,691) disclose miniaturized conformal wideband fractal antennas.

Prior art Cohen (USP. 6,127,977) disclose microstrip patch antenna.

Prior art Legay et al (USP. 6,034,645) disclose miniature annular microstrip resonant antenna.

Prior art Cohen (USP. 6,476,766) disclose fractal antenna ground counterpoise.

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***Inquiry***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuc D Tran whose telephone number is (571) 272-1829. The examiner can normally be reached on M-F Flex hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TC  
Sept 30, 2004

  
Don Wong  
Supervisory Patent Examiner  
Technology Center 2800